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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/627,222 | 07/25/2003 | Michael J. Putnam | PGI6044P0052US | 2436 |
| 32116 | 7590 | 11/08/2005 | EXAMINER | |
| WOOD, PHILLIPS, KATZ, CLARK & MORTIMER 500 W. MADISON STREET SUITE 3800 CHICAGO, IL 60661 | | | YAO, SAMCHUAN CUA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1733 | |

DATE MAILED: 11/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/627,222

Applicant(s)

PUTNAM ET AL.

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) 11-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al (US 5,414,914) in view of Haid et al (US 5,240,764), Knoke et al (US 5,552,206), and James et al (US 5,822,833) for reasons of record set forth in a prior office action dated 05-03-05, and further in view of Seuhr et al (US 5,670,234).

As for an added limitation of jet dyeing a nonwoven web after the recited heating step, such would have been obvious in the art as such is conventional in the art of making hydroentangled fabrics as exemplified in the teachings of Seuhr et al (col. 4 lines 22-65; figures 3-4). Seuhr et al teaches that a jet dyeing process "*is a standard dyeing process used on many apparel and home finishing fabrics to soften the fabric and provide uniform color distribution. Such finishing processes are standard in the textile industry ...*" (col. 4 lines 28-36).

Response to Arguments

3. Applicant's arguments filed on 09-06-05 have been fully considered but they are not persuasive.

On page 6 full paragraph 4, Counsel argued "*... this relatively large assortment of diverse prior art references, which have been combined with shifting reliance*

on a variety of principal references, certainly suggests the references themselves do not teach or suggest applicants' admittedly novel method." ("the references ... method" original italicized). It is respectfully submitted that, obviousness in the sense of 35 USC 103 does not preclude shifting an applied principal reference. The shifting application of a principal reference is in response to Counsel's protracted incremental changes to the recited scope of the claimed invention. As for Counsel's assertion that the claimed method is novel, Examiner agrees. That's precisely the reason why the claimed invention is rejected under 35 USC 103 instead of being rejected under 35 USC 102. As for Counsel's argument regarding the references being "*diverse prior art references*", it is respectfully submitted that, the references applied are all based on analogous art. One in the art wanting to practice and enhance a process of Suzuki et al would have look for solutions to analogous/related prior art references such as the teachings of the secondary references.

On page 7 full paragraph 1, Counsel argued Suzuki et al does not teach or suggest "*... of forming three-dimensional images, in accordance with the presently pending claims.*". Examiner agrees. However, such would have been obvious in the art, because as noted in a prior office action, James et al discloses the desirability of hydroentangling a web on a three-dimensional image transfer device to impart a desired 3-D design arrangement on the web (col. 1 lines 10 to col. 3 lines 51; figures 1A-1c, figures 10-12).

On page 7 full paragraph 2, Counsel argues that "... James et al. simply does not teach ... including the provision of a fibrous matrix as claimed with elevation of the temperature of the imaged nonwoven fabric, followed by jet-dyeing of the fabric." . It is respectfully submitted that, Counsel is resorting to a classic piecemeal analysis of the applied references. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

On page 7 last paragraph, Counsel argued that "*Applicants have never contended that individual steps of their process might not be known from the prior art, but instead, have emphasized the unique combination of steps by which a highly durable nonwoven fabric can be formed.*". ("unique combination of steps" originally italicized). Applicant's claimed invention may entail "*unique combination of steps*". However, the main issue here is whether or not the claimed invention with "*unique combination of steps*" would have been obvious in the art in the sense of 35 USC 103 in light of the collective teachings of the prior art references. It is respectfully submitted that, the recited combination of steps would have been obvious in the art for reasons of record. As for Counsel's argument that a fabric resulting the recited process is "*highly durable*", such would/should have been expected, since Haid et al, drawn to a spunlaced

nonwoven web, discloses hydroentangling a web comprising base fibers and thermo-fusible binder fibers and then *“remelting the fusible fibers (i.e., heat setting) ...”* to *“improve durability and abrasion resistance”* (abstract; col. 2 lines 26-31); and, b) Knoke et al teaches *“[a] special softness is attained when the non-woven fabric is bonded using water jets. ... for obtaining an especially high internal strength, thermoplastic binding fibers can be included as well”* (col. 2 lines 47-50 and claims 15-16).

On page 8 lines 1-3, Counsel argued that, *“... page 11 of the Specification, “no application of chemical binders was required to obtain the positive results””* (quotation in original). It is respectfully submitted that, Counsel's argument is not commensurate with the scope of the recited claims. None of the presently recited claims positively precludes the application of chemical binder.

On page 8 full paragraphs 1-2, Counsel argued that, *“Suzuki et al principally concerned with employing a low cost forming surface. ... no motivation in Suzuki et al to modify its teachings in accordance with the Haid et al patent, since again, use of relatively expensive fusible fibers would be contrary to the teachings of Suzuki et al seeking low cost formation.”* It is respectfully submitted that, obviousness in the sense of 35 USC 103 does not say anything about “cost” of production, but rather only a showing of reasonable expectation of success is required. Moreover, one in the art would have considered the tradeoff between the cost and the advantage of incorporating fusible binder fibers into a fibrous web in a process taught by Suzuki et al. One in the art motivated by the desire to

enhance the durability and aesthetic appearance of a finished hydroentangled web suggested by Suzuki et al would have been motivated to incorporate the teachings of the applied secondary references.

On page 8 full paragraph 3, Counsel argued that “... *the fabric of Suzuki would not exhibit sufficient durability as to permit the fabric to perform acceptably when subjected to jet-dyeing.*”. Examiner strongly disagrees. Suzuki et al is directed to a hydroentangled web which is suitable for “... *clothing and ornaments, etc.*” (col. 6 lines 18-26). As discussed by Seuhr et al, a jet dyeing process “*is a standard dyeing process used on many apparel and home finishing fabrics to soften the fabric and provide uniform color distribution. Such finishing processes are standard in the textile industry ...*” (col. 4 lines 28-36). Moreover, the teachings of Seuhr et al also illustrate that one can effectively subject a conventionally hydroentangled web (i.e. web free of heat-activated binder fibers) to a jet-dyeing operation (col. 4 lines 27-31). In any event, even for the sake of argument that Counsel is correct, it is not a hydroentangled web of Suzuki et al, which is being subjected to jet-dyeing operation, but rather a modified hydroentangled web (i.e. a 3-D hydroentangled fibrous web comprising binder fibers, where binder fibers have been heat-activated).

On page 9, Counsel argued that, “*Knoke et al states: Alternatively, strengthening binding agents are also usable.*”. First of all, as noted above, the claims are presently recited do not preclude the use of resin binder. Secondly, Knoke et al is NOT a primary reference. More important, it is not necessary in Knoke et al to

use binding agents, but rather, the application of binding agents is merely an alternative embodiment for making a hydroentangled fibrous web.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
10-30-05